

CLAIMS

1. A dummy medical instrument for use in a simulator, the instrument comprising a control body with user manipulatable angulation control, an insertion tube and an umbilical extending from the control body, wherein in a real instrument corresponding to the one being simulated, at least one angulation cable would extend from the user manipulatable controls to the tip of the insertion tube such that movement of the angulation control changes the angulation of the tip, and wherein in the dummy medical instrument the angulation cable extends from the user manipulatable angulation control, and down the umbilical to a device for controlling the resistance to movement of the cable to provide force feedback simulating the force which would be felt at the angulation control of a real instrument.
2. An instrument according to claim 1, wherein the cable extends from the control body and around a pulley where it is turned through substantially 180° before being routed down the umbilical.
3. An instrument according to claims 1 and 2, wherein the angulation cable is a co-axial cable in which a central wire is moveable within a sleeve.
4. An instrument according to claim 3, wherein the sleeve is removed for the portion of the cable surrounding the pulley, such that the wire engages directly with the pulley.
5. An instrument according to any one of the preceding claims, wherein more than one cable is provided.

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6. An instrument according to claim 2 and claim 5, wherein each cable has its own pulley system.

5 7. An instrument according to claim 6, wherein a first cable is wrapped around a single pulley, while a second cable is wrapped around a pair of pulleys which are spaced apart so that the second cable forms a loop outside of the loop formed by the first cable.

10 8. An instrument according to claim 2 or any one of claims 3, 6 or 7 when dependent on claim 2, wherein the or each pulley preferably has a convex periphery, and at least a part of the periphery of the pulley is provided adjacent to the facing wall of a pulley
15 housing.